

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous versions and listings of claims in this application.

Claim Listing:

1. (Currently amended) A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed,~~ the method comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

reducing, using the first determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the a~~ beginning of ~~the a~~ burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision, and

reducing, using the second determined weighting coefficient, in soft bit decision-making in the decoder, the significance of at least one symbol at ~~the an~~ end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

2. (Currently amended) A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed,~~ the method comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

determining a ~~first~~-weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot, and

reducing, using the ~~first~~-determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at the beginning of ~~the a~~ burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

3. (Currently amended) A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed,~~ the method comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

determining a ~~second~~-weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, and

reducing, using the ~~second~~-determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the an~~ end of ~~the a~~ burst the base station

receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

4. (Canceled).

5. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients are higher than 0 but lower than 1.

6. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

7. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

8. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

9. (Currently amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~which receiver measures the strength of a received signal and employs a decoder for soft decision making;~~ the base station receiver comprising:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

means for determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

means for determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

means for reducing, using the first determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the~~ a beginning of ~~the~~ a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision, and

means for reducing, using the second determined weighting coefficient, in soft bit decision-making in the decoder, the significance of at least one symbol at ~~the~~ an end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

10. (Currently amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~which receiver measures the strength of a received signal and employs a decoder for soft decision making;~~ the base station receiver comprising:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value.

means for determining a ~~first~~ weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot, and

means for reducing, using the ~~first~~ determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the~~ a beginning of ~~the~~ a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

11. (Currently amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~which receiver measures the strength of a signal received at a base station and employs a decoder for soft decision-making;~~ the base station receiver comprising:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

means for determining a ~~second~~ weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, and

means for reducing , using the ~~second~~ determined weighting coefficient in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the~~ an end of a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

12. (Canceled).

13. (Previously presented) A base station receiver as claimed in claim 9, 10 or 11, wherein the weighting coefficients are higher than 0 but lower than 1.

14. (Previously presented) A base station receiver as claimed in claim 9, 10 or 11, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

15. (Previously presented) A base station receiver as claimed in claim 9, 10 or 11, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

16. (Previously presented) A base station receiver as claimed in claim 9, 10 or 11, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

17. (Previously presented) A base station receiver as claimed in claim 9, 10 or 11, wherein the base station receiver is implemented by a processor.

18. (Currently amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~which receiver measures the strength of a received signal and employs a decoder for soft decision making;~~ wherein the base station receiver is the receiver comprising a processor configured to:

measure the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

~~configured to~~ determine a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

~~configured to~~ determine a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

~~configured to~~ reduce, using the first determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the~~ a beginning of ~~the~~ a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision, and

~~configured to~~ reduce, using the second determined weighting coefficient, in soft bit decision-making in the decoder, the significance of at least one symbol at ~~the~~ an end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

19. (Currently amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~which receiver~~

~~measures the strength of a received signal and employs a decoder for soft decision making;~~
~~wherein the base station receiver is~~ the receiver comprising a processor configured to:

measure the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

~~configured to~~ determine a ~~first~~ weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot, and

~~configured to~~ reduce, using the ~~first~~ determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the~~ a beginning of ~~the~~ a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

20. (Currently amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, ~~which receiver measures the strength of a signal received at a base station and employs a decoder for soft decision making; the base station receiver being~~ the receiver comprising a processor configured to:

measure the strength of the signal the base station receives in at least two consecutive time slots, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value,

~~configured to~~ determine a ~~second~~ weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, and

~~configured to~~ reduce, using the ~~second~~ determined weighting coefficient, in soft bit decision-making in a decoder, the significance of at least one symbol at ~~the~~ an end of a burst the

base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

21. (Canceled).

22. (Previously presented) A base station receiver as claimed in claim 18, 19 or 20, wherein the weighting coefficients are higher than 0 but lower than 1.

23. (Previously presented) A base station receiver as claimed in claim 18, 19 or 20, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

24. (Previously presented) A base station receiver as claimed in claim 18, 19 or 20, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

25. (Previously presented) A base station receiver as claimed in claim 18, 19 or 20, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

26. (Canceled).